

REMARKS

Reconsideration and allowance of the above-reference application are respectfully requested.

I. STATUS OF THE CLAIMS

Claims 1-3 and 15 are amended herein, and new claims 63 and 64 are added.

In view of the above, it is respectfully submitted that claims 1-3,15, 63 and 64 are currently pending and under consideration.

II. CLAIM OBJECTIONS

Claims 1-3 and 15 are amended herein to overcome the claim objections.

In view of the above, it is respectfully requested that the objections are overcome.

III. REJECTION OF CLAIMS 2 and 3 UNDER 35 U.S.C. § 112, SECOND PARAGRAPH

Claims 2 and 3 are amended herein to overcome the 35 U.S.C. § 112, second paragraph rejection.

In view of the above, it is respectfully submitted that the rejection is overcome.

IV. REJECTION OF CLAIMS 1-3 AND 15 UNDER 35 U.S.C. § 102(B) AS BEING ANTICIPATED BY N. HENMI ET AL. (IEEE PHOTONICS TECHN. LETTERS)

The present invention as recited in claim 1, for example, relates to a method for optical transmission adopting dispersion compensation, comprising "determining whether a specific one of the optical fiber types exists in the optical transmission line" and "providing a dispersion compensator responsive to said determination, in each of said optical transmitter, said optical receiver, and said optical amplifier according to whether an optical fiber type of an optical fiber transmission line segment immediately downstream of said optical transmitter is said specific one of the optical fiber types or not and a dispersion value of said optical fiber transmission line segment immediately downstream of said transmitter, according to whether an optical fiber type of an optical fiber transmission line segment immediately upstream of said optical receiver is said specific one of the optical fiber types or not and a dispersion value of said optical fiber transmission line segment immediately upstream of said optical receiver, and according to whether an optical fiber type of an optical fiber transmission line segment immediately upstream of said optical amplifier is said specific one of the optical fiber types or not and dispersion values

of optical fiber transmission line segments immediately upstream and downstream of said optical amplifier wherein, at least one dispersion compensator provided in at least one of said optical transmitter, said optical receiver and said optical amplifier provides a dispersion selected from a plurality of stepwise varying dispersions determined according to said predetermined range."

Henmi discloses a method to suppress the nonlinearities in transmission fibers in lumped repeater systems. The method increases optical amplifier repeater spacing by setting a normal dispersion fiber as a transmission fiber, and by setting a $1.3\mu\text{m}$ zero-dispersion fiber as a dispersion compensator at the end in each repeater so as to keep the total dispersion of the complete amplifier repeater spacing at around zero.

However, on page 6 of the Office Action, the Examiner indicates that Henmi fails to disclose a dispersion compensator in any of a transmitter, receiver, or amplifier. Therefore, with regard to the features as recited in claim 1 as amended herein, it is submitted that Henmi does not disclose the claimed features.

Similar to claim 1, claim 15 recites, "a determining unit determining whether a specific one of the optical fiber types exists in the optical transmission line" and "at least one dispersion compensator provided in response to said determining unit in at least one of said optical transmitter, said optical receiver, and said optical amplifier according to whether an optical fiber type of an optical fiber transmission line segment immediately downstream of said optical transmitter is said specific one of the optical fiber types or not and a dispersion value of said optical fiber transmission line segment immediately downstream of said optical transmitter, according to whether an optical fiber type of an optical fiber transmission line segment immediately upstream of said optical receiver is said specific one of the optical fiber types or not and a dispersion value of said optical fiber transmission line segment immediately upstream of said optical receiver, and according to whether an optical fiber type of an optical fiber transmission line segment immediately upstream of said optical amplifier is said specific one of the optical fiber types or not and dispersion values of optical fiber transmission line segments immediately upstream and downstream of said optical amplifier wherein, said dispersion compensator provides a dispersion selected from a plurality of stepwise varying dispersions determined according to said predetermined range."

Claims 2 and 3 depend from claim 1. Thus, for at least the reason that claim 1 distinguishes over the cited prior art, it is respectfully submitted that claims 2 and 3 also distinguish over the cited prior art.

In view of the above, it is respectfully submitted that the rejection is overcome.

V. NEW CLAIMS

Claims 63 and 64 are added and depend from claim 1. Thus, for at least the reasons that claim 1 distinguishes over the cited prior art, it is respectfully submitted that claims 63 and 64 also distinguish over the cited prior art. Claim 63 recites, "providing a plurality of optical amplifiers, wherein, said dispersion compensator is not provided in said optical receiver in a case where an optical fiber type of an optical fiber transmission line segment immediately upstream of said optical receiver is said specific one of the optical fiber types and is said dispersion shifted fiber type; a dispersion of a dispersion compensator provided in one of said plurality of optical amplifiers is determined according to dispersion values of optical fiber transmission line segments immediately upstream and downstream of the optical amplifier; and an optical fiber type of an optical fiber transmission line segment immediately upstream of the optical amplifier is said single-mode fiber type and an optical fiber type of an optical fiber transmission line segment immediately downstream of the optical amplifier is said dispersion shifted fiber type."

Claim 64 recites, "providing a plurality of optical amplifiers, wherein, a dispersion compensator is not provided in a first optical amplifier in a case where an optical fiber type of an optical fiber transmission line segment immediately upstream of the first optical amplifier is said specific one of the optical fiber types and is said dispersion shifted fiber type; a dispersion of a dispersion compensator provided in a second optical amplifier is determined according to dispersion values of optical fiber transmission line segments immediately upstream and downstream of the second optical amplifier; and an optical fiber type of an optical fiber transmission line segment immediately upstream of the optical amplifier is said single-mode fiber type and an optical fiber type of an optical fiber transmission line segment immediately downstream of the optical amplifier is said dispersion shifted fiber type."

In view of the above, it is respectfully submitted that claims 63 and 64 patentably distinguish over the cited prior art.

VI. CONCLUSION

In view of the foregoing amendments and remarks, it is respectfully submitted that each of the claims patentably distinguishes over the prior art, and therefore defines allowable subject matter. A prompt and favorable reconsideration of the rejection along with an indication of allowability of all pending claims are therefore respectfully requested.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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